

UF5400 thru UF5408

1.FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * High temperature metallurgically bonded construction
- * Diffused junction
- * Capable of meeting environmental standards of MIL-S-19500
- * For use in high frequency rectifier circuits
- * Ultrafast recovery time for high efficiency
- * High temperature soldering guaranteed: 260°C/10 seconds
- * 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

2.Mechanical Data

Case: JEDEC DO-201AD, molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.038 oz., 1.03 g

Handling precaution: None

3.Electrical Characteristic

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	UF5400	UF5401	UF5402	UF5403	UF5404	UF5405	UF5406	UF5407	UF5408	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	3.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150									A
Typical thermal resistance (Note 2)	$R\theta_{JA}$	20									°C/W
Maximum DC blocking voltage temperature	T_A	150									°C
Operating junction temperature range	T_J	-50 to +150									°C
Storage temperature range	T_{STG}	-50 to +150									°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	UF54 00	UF54 01	UF54 02	UF54 03	UF54 04	UF54 05	UF54 06	UF54 07	UF54 08	Unit	
Maximum instantaneous forward voltage at 3.0A	V _F	1.00			1.30		1.70				V	
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 100°C	IR	10 200										μA
Typical reverse recovery time (Note 1)	trr	50					75				ns	
Typical junction capacitance at 4.0V, 1MHz	CJ	45					36				PF	

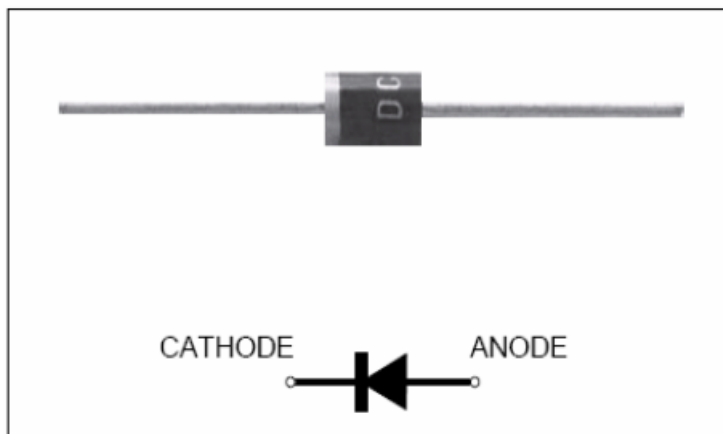
NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ultrafast Rectifiers

Reverse Voltage 50 to 1000V

Forward Current 3.0A



We declare that the material of product compliance with RoHS requirements.

4. Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

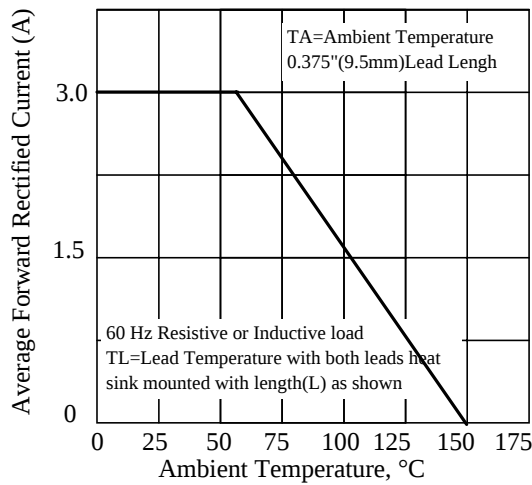


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

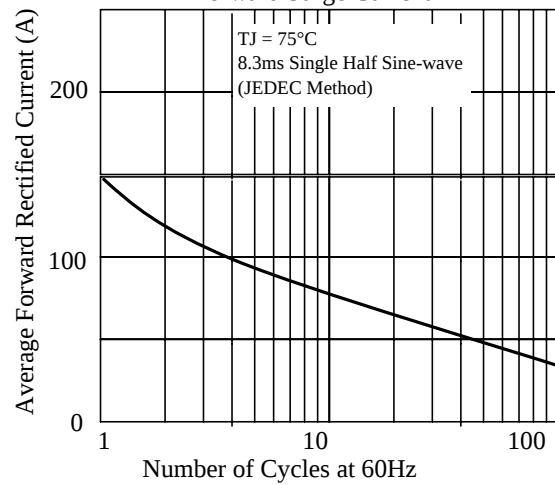


Fig. 3. - Typical Instantaneous Forward Characteristics

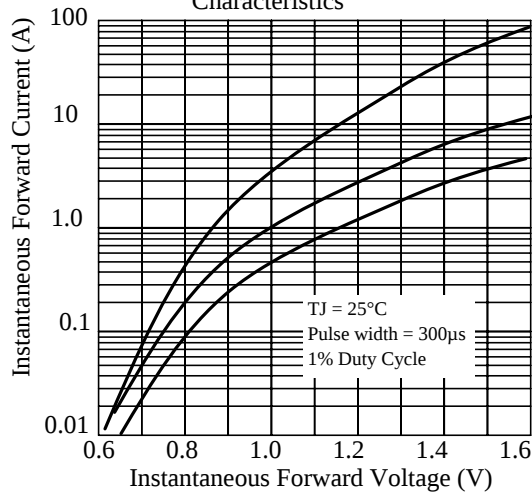


Fig. 4. - Typical Reverse Characteristics

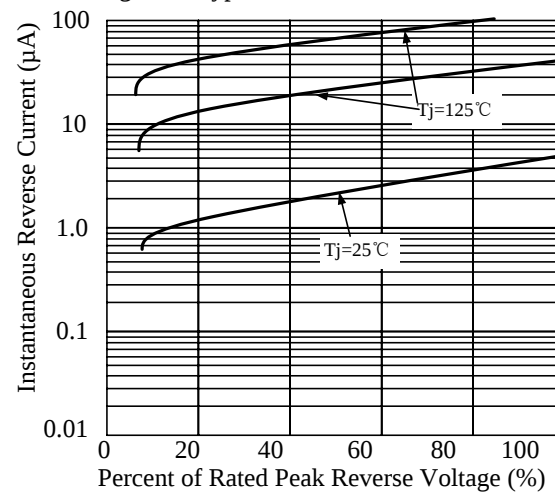


Fig 5. - typical transient thermal impedance

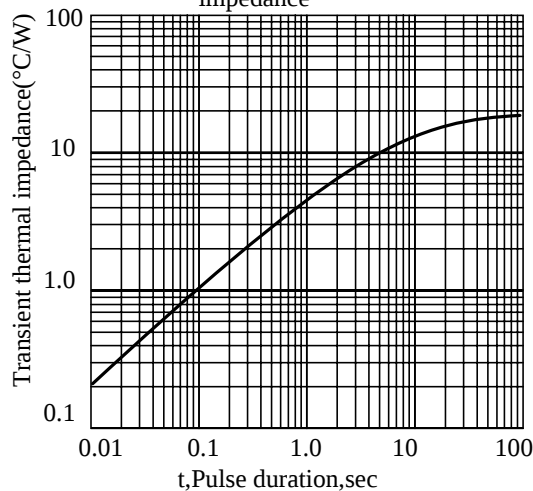
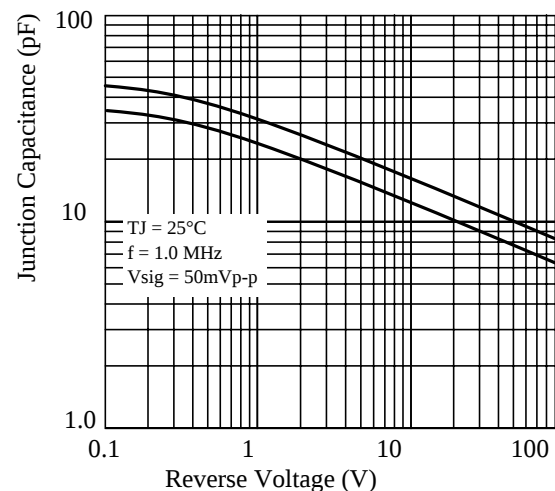


Fig 6. - Typical Junction Capacitance



5.Package Dimensions in inches and (millimeters)

